

## INTERNATIONAL SEARCH REPORT

International Application No  
PC1/US2004/020279

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C12Q1/68 C07H21/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, Sequence Search, BIOSIS, EMBASE, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/75172 A (UNIV SOUTHERN CALIFORNIA) 11 October 2001 (2001-10-11) claims 1-24; tables I-II	22,23
X	<p>-----</p> <p>DATABASE EMBL 'Online! 23 October 1995 (1995-10-23), "H.sapiens CpG island DNA genomic MseI fragment, clone 97b5, forward read cpg97b5.ftla." XP002312906 retrieved from EBI accession no. EM_HUM:HS9785F Database accession no. HS9785F the whole document</p> <p>-----</p> <p>---/---</p>	6

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

18 January 2005

Date of mailing of the international search report

01/02/2005

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US2004/020279

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>YAN P S ET AL: "CpG island arrays: an application toward deciphering epigenetic signatures of breast cancer" CLINICAL CANCER RESEARCH, THE AMERICAN ASSOCIATION FOR CANCER RESEARCH, US, vol. 6, no. 4, April 2000 (2000-04), pages 1432-1438, XP002245955 ISSN: 1078-0432 cited in the application abstract; figure 3; table 2</p>	7
A	<p>HERMAN J G ET AL: "INACTIVATION OF THE CDKN2/P16/MTS1 GENE IS FREQUENTLY ASSOCIATED WITH ABERRANT DNA METHYLATION IN ALL COMMON HUMAN CANCERS" CANCER RESEARCH, AMERICAN ASSOCIATION FOR CANCER RESEARCH, BALTIMORE, MD, US, vol. 55, no. 20, 15 October 1995 (1995-10-15), pages 4525-4530, XP001109420 ISSN: 0008-5472 abstract</p>	1-23
A	<p>TOYOTA M ET AL: "CpG island methylator phenotype in colorectal cancer" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 96, July 1999 (1999-07), pages 8681-8686, XP002307651 ISSN: 0027-8424 abstract</p>	1-23
A	<p>HILTUNEN M O ET AL: "Hypermethylation of the APC (adenomatous polyposis coli) gene promoter region in human colorectal carcinoma" INTERNATIONAL JOURNAL OF CANCER, NEW YORK, NY, US, vol. 70, no. 6, 17 March 1997 (1997-03-17), pages 644-648, XP002305016 ISSN: 0020-7136 abstract</p>	1-23

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International Application No  
PCT/US2004/020279

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>BACHMAN K E ET AL: "Methylation-associated silencing of the tissue inhibitor of metalloproteinase-3 gene suggest a suppressor role in kidney, brain, and other human cancers." CANCER RESEARCH. 15 FEB 1999, vol. 59, no. 4, 15 February 1999 (1999-02-15), pages 798-802, XP002312904 ISSN: 0008-5472 abstract</p>	1-23
A	<p>YOUNG J ET AL: "HPP1: a transmembrane protein-encoding gene commonly methylated in colorectal polyps and cancers." PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA. 2 JAN 2001, vol. 98, no. 1, 2 January 2001 (2001-01-02), pages 265-270, XP002312905 ISSN: 0027-8424 abstract</p>	1-23

# INTERNATIONAL SEARCH REPORT

national application No.  
PCT/US2004/020279

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 8-21, 23  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claims 8-21, 23 encompass a surgical step to be carried out on the human/animal body, the search has been carried out as if said step were not present
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; It is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/020279

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0175172	A	11-10-2001	AU 5308801 A	15-10-2001
			CA 2404568 A1	11-10-2001
			EP 1283906 A1	19-02-2003
			JP 2004505612 T	26-02-2004
			WO 0175172 A1	11-10-2001
			US 2004170977 A1	02-09-2004
			US 2004033490 A1	19-02-2004
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